Perfect for applications that need a bit more than just adhesive, Metalcraft's Stick and Staple RFID Tag attaches directly to assets with adhesive with the added option of stapling the tag, ensuring the tag stays attached to those hard-to-adhere surfaces while not damaging the inlay.

For more information read our case study, Tracking Spirits.

Features	Ideal for applications involving wood (pallets, crates, barrels, etc) or cardboard Digital printing process provides for greater print capability with logos or special designs, ensuring crisp details on even the most complex logos for maximum clarity. Meets EPCglobal Gen2 (V 1.2.0) as well as ISO/IEC 18000-6C:2004/Amd 1:2006 (type C and update of Types A and B). Compatible with RFID Tracking Software
Product Print Options	Barcode . Data Matrix . QR Code . RFID . Serial Number . Text
Product Functionality	Abrasion Resistance . Chemical Resistance
Popular Applications	Inventory . Wineries / Breweries . Construction / Tool Tracking . Manufacturing
Category	Warehouse - RFID . Asset Tracking - RFID . RFID for Wood Surfaces

METAL CRAFT
ID MADE BETTER

UNIVERSAL RFID
BY METAL CRAFT

Specifications Data

Material	2.3 white mil polypropylene
Serialization	Bar code and human-readable equivalent is produced using the latest high-resolution digital technology available, which provides excellent clarity and easy scanning. Code 39 is the standard symbology with a range of 2.7 to 9.4 CPI (characters per inch). Optional symbology is Code 128, I 2 of 5, 2D DataMatrix and QR Code.
Label Copy	The label copy may include block type, stylized type, logos or other designs. All copy, block type, stylized type, logos, designs, and bar code are subsurface printed. This unique process provides excellent resistance to solvents, caustics, acids and moderate abrasion.
Colors	Standard colors include black, red, yellow, green, dark blue, orange, purple or blue. Custom spot colors are also available at no additional charge. Due to contrast needed for the bar code scanner, all bar codes are black.
Standard Adhesive	Permanent acrylic adhesive
Frequency Range	UHF = 860-960 MHz; HF = 13.56 MHz
Sizes	4" x 2" (size must include a 1/2" blank border on all sides to protect inlay from staples)
Packaging	Produced and shipped in roll form.

Chemical Testing

Tags were applied to glass panels at room temperature conditions and immersed in the chemicals noted below for 48 hours. Results are noted below.

Chemical Test Data

Length of immersion	5% salt water	Glass cleaner	Bathroom cleaner	Isopropyl Alcohol 99%	Diesel Fuel	NaOH ph12.0	HCK pH 1.0	Brake fluid
2 Hours	no effect	no effect	no effect	no effect	adhesive ooze	no effect	no effect	no effect
24 hours	no effect	no effect	no effect	no effect	no effect	no effect	no effect	no effect
48 hours	no effect	no effect	no effect	no effect	no effect	no effect	no effect	no effect

Destructive Testing

Burst strength - 1" wide strip of the tag that included the inlay was stapled to a wooden block and peeled at 180 degrees/12 inches per minute with the iMass SP-2100 peel and adhesion tester. Goal was to determine the static peak peel value at the point the staple pulled through the tag to determine a burst strength or tensile strength value of durability. A burst strength of more than 10 lbs. was needed to affect the tag.

Destructive Test Data

Temperature Testing

Sample showed no deterioration after being subject to -40°F for 24 hours, and the inlay was still readable with a handheld reader prior to removal from the freezer. Samples showed no deterioration when exposed to 150°F, 200°F, and 250° for 1 hour each. Sample started showing discoloration after exposure to 300°F for 1 hour, and melted after exposure to 350°F for 1 hour. The inlay was readable after exposure to 300°F, but was not readable after exposure to 350°F.

Temperature Test Data

Read Range Testing

Theoretical read ranges in the Voyantic anechoic chamber.
Read Range Test Data

Stick & Staple RFID Tag Anechoic Chamber Results

Wood	Glass	Plastic	Cardboard
25 ft	5 ft	34 ft	21 ft

Barcode Readibility Testing

Barcode Readability Test Data

Abrasion Testing

Abrasion Test Data

Label Adhesion Testing

Label Adhesion Test Data

Pull Testing

Pull Test Data